



Protecting the Nest Egg: A Primer on Defined Benefit and Defined Contribution Retirement Plans

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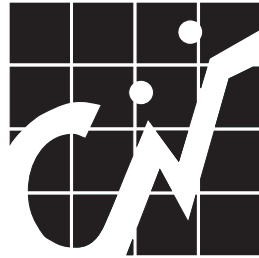
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COUNCIL OF
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**Protecting the Nest Egg:
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DB versus DC Pension Plans

In the past several years there has been a major upheaval in the way American workers' pension benefits are funded. A new model is replacing the type of plan that has traditionally formed one leg of the three-legged stool of economic security (the other two being Social Security and personal savings). This monograph discusses the pros and cons of each pension model and summarizes the key facts that policymakers should focus on when deciding which type of plan to favor.

The defined benefit plan was, for many years, the main type of plan that large employers offered. As its name suggests, the employer defines and guarantees a specific pension amount to the employee. The benefit is determined according to a formula or computation based on the employee's salary and years of service. Under defined benefit, or DB, plans, the employee is entitled to the promised specific benefit. Employees can feel secure about their pension benefits because employers with DB plans are required to set money aside to pay promised benefits. And private employers must pay into an insurance fund to cover benefits if the employer is unable to. Of course, most employers try to get the best and safest return on the money they set aside, to be able to pay benefits when the bill falls due. But the employer is on the hook for the benefits regardless of its investment success and the employee has a legal right to the benefits whether or not the employer invests well.

The defined contribution plan, which by many measures is becoming the predominant plan in the US, operates very differently. Under a defined contribution, or DC, plan, the employee, often aided by the employer, sets aside a specific amount of money—a "defined contribution"—at regular inter-

vals. These are usually known as 401(k) plans, though there are other types as well. At retirement, the employee has an account balance which is completely dependant on how much has been put into the fund and how these contributions have grown over time as they have been invested. Thus, in a DC plan, the employee is at risk if invested funds do badly. The account balance can be taken as a lump sum or used to receive a pension.

In recent years, a type of hybrid plan, combining features of DB and DC plans, has entered the system and is growing rapidly. Technically, hybrids are a type of DB plan, and nearly a quarter of DBs have become hybrids. One type of hybrid is a cash balance plan. Like a DB plan, a cash balance plan has benefits determined by formula, pre-funded employer contributions, and assets managed by the employer. But like a DC plan, the benefits formula is based on wages and interest earned, not length of service, and is reported as an individual account, which can be paid as a lump sum or annuity at retirement or cashed in or rolled over to an IRA when an employee leaves early.

An important question about all pension plans is whether they add to the retirement leg of the three-legged stool more than they subtract from the savings leg. Research suggests that pensions do add to savings but by less than the full amount. Although researchers' findings differ, DB plans probably add more to savings than DC plans, in part because they help lower and middle income workers who tend to save less. One study estimates that at most about one-third of 401(k) savings is additional to what would have been saved otherwise; two-thirds substitutes for other personal savings.¹

There are other differentiating aspects of these plans as well. Often DC plans allow each individual plan member to pick how he or she invests, whereas professionals usually invest DB plan assets collectively. Data suggest that when individuals invest their own pension assets they tend to do so all over the risk spectrum. They are either way too risky (putting all their money in one or just a few stocks, selecting outlandish asset classes or constantly buying and selling to capture last year's good idea) or way too conservative (leaving all their money in the equivalent of a bank passbook account). Various studies have shown that it is more likely under DC plans than under DB plans for a significant number of plan participants to end up with a reduced pension because funds were invested poorly.

- ◆ One half of DC plan investors do not diversify; almost none rebalance portfolios periodically.²
- ◆ Economist Alicia Munnell estimates that between 1985-2001 DB plans outperformed DC plans by 0.8 percent on average.³ Over a 30-year span, that small advantage multiplies to a 25 percent difference in total return.
- ◆ Financial research firm Watson Wyatt found that the ten-year average annual difference between the median return to defined benefit plans and 401(k) plans was 0.07 percent higher for DB plans between 1990 and 1999.⁴
- ◆ A study by professors at the Universities of Michigan and California found that individual investors who traded most earned annual returns that were 6.5 percentage points below investors who did not trade frequently.⁵
- ◆ According to the research firm Dalbar, between 1984 and 2002, the average equity investor earned only 2.57 percent annually compared to average annual inflation of 3.14 percent and earnings of 12.22 percent for the S & P 500 index. The average fixed income investor earned 4.24 percent annually compared to the long-term government bond

index of 11.70 percent. Even after adjusting for differences in the timing of investment, Dalbar calculates that investors underperformed the market by 3.4 percentage points each year.⁶

Another concern raised by DC plans is that it is much more expensive to manage millions of little accounts than one big one. For example, DC plan participants cannot cut as good a deal with fund managers as DB plan professionals can, so the cost for managing each dollar of an employer's pension assets goes way up. Therefore, under DC plans, too much of the money put into pension savings goes to pay administrative costs instead of pension benefits.

- ◆ Research on advisory fees by Profs Freeman and Brown indicate that DB pension funds pay only about half of what DC plans pay for investment advisory services, 0.28 percent versus 0.56 percent of assets.⁷

Proponents of DC plans counter that although it might cost more to operate the investment side of a DC plan, the administrative costs of DB plans might be higher. DBs need an actuary to tell them how to plan for annuities, and more lawyers, administrators and record keepers to comply with accounting and regulatory expenses that DC plans don't have. Private DB plans pay for insurance from the Pension Benefit Guarantee Corporation, to ensure that pensions are paid even if the company offering them founders.

- ◆ Research indicates that very small DB plans pay proportionately higher administrative costs than either larger DB plans or DC plans. The smallest plans (15 employees) have expenses of 3.1 percent of payroll for DB versus 1.44 percent for DC. But for large firms (10,000 employees) the costs are nearly

the same for DB and DC, and they are quite small—0.23 percent for DB versus 0.16 percent for DC.⁸

These costs depend considerably on the size of the firm or organization. That explains why most of the conversions from DB to DC plans have been among small businesses. Large-scale enterprises, including public pension funds, show very little difference in cost between DB and DC plans.

What's needed is a measure of the total combined operating and investment costs. The few studies that have attempted to add it all together favor DB plans.

- ◆ Experts writing for the Department of Labor estimate that fees and expenses of small 401(k) plans are similar to those of retail mutual funds, or between 1.0 and 1.4 percent of assets, on average. Institutional funds, they note, typically have expense ratios that are 0.5 percentage point lower.⁹
- ◆ The Investment Company Institute, which represents the mutual fund industry, found that the total operating expense ratio of DB plans was on average 40 basis points less than that of mutual funds, 31 bp for DB versus 71 bp for DC. And, those numbers understate DC costs by excluding 12-b1 marketing and distribution fees that average between 0.25 and 1.0 percent of assets.¹⁰
- ◆ When the Illinois Municipal Retirement Fund (IMRF) looked into switching from a DB to DC plan, it found that its total cost—administrative and investment expenses—could rise from 0.44 percent of assets to as much as 2.25 percent of assets, a difference that approached \$315 million a year.¹¹

Finally, proponents of DC plans say that it is much more cost effective for individuals who change jobs to take their DC plan assets with them when they go compared to DB plans, which

tend to reward workers who work long careers with one company. Regardless of the merits of job changing versus career building, the key questions are: What happens to the money when a person changes jobs? How much money will workers have when they reach retirement? Individuals can accumulate large balances in a DC plan over the course of their working lives. But do they?

The answers to these questions put DC plans in a very bad light. Because DC plan participants can cash out their pension assets when they change jobs and spend the money, they are much less likely to build up a sufficient account balance to pay for retirement. And many workers do not even participate in DC plans that are offered to them. DC plans tend to favor higher-income workers who can take advantage of the tax subsidy—money put into a 401(k) plan is not taxed until withdrawn; lower-income workers have less incentive and ability to save to avoid taxes.

While DC plan members may feel that it benefits them to be able to cash out their pension plan to pay for other purchases such as houses or college tuitions or health bills, it means that these plan members may arrive at retirement lacking grocery money. Unfortunately, more than half of DB plans, cash balance hybrids in particular plus a rising percentage of traditional plans, have begun offering lump sum payments.

- ◆ 26 percent of employees who are eligible for 401(k) plans do not participate. Non-participation is concentrated in lower-income employees. Among all employees, less than 10 percent contribute the maximum allowable amount, which further restricts their ability to match DB payout amounts.¹²
- ◆ Studies show that more than half of participants in DC plans take their money out of the system when they leave a job. It's estimated that about one-quarter to one-third of assets

are drained out of the system that way.¹³

- ◆ Other studies confirm that on average 401(k)s are underfunded relative to the size of the pension annuity they could buy. The average 401(k) plan has a balance of about \$64,600, or enough to purchase an annuity of about \$5170 per year—that's less than the current median annual private pension payment of about \$6000 per year. An individual would have to have a balance of about \$175,000 to purchase an annuity at age 65 that paid the median public pension of about \$14,000.¹⁴

When an employee in a DB plan retires, the payout is usually made as a lifetime annuity with automatic protection of benefits for a surviving spouse. In other words the worker and the worker's spouse receive payments as long as either of them lives. DC plans, however, typically are paid out as a lump sum. That means that a retiree has to decide how to apportion payments over his or her lifetime. Although they could purchase an annuity, like a DB retiree, few actually do, and buying an annuity at retirement is more costly and more subject to market vagaries than DB annuities. Not taking an annuity means that the retiree can outlive his or her money.

- ◆ The median DB pension amount was \$13,200 for those ages 61-64 in 2002. A DC fund would need a balance of \$165,000 to purchase that annuity today. The average DC balance for that age group was \$106,000 for all and \$156,180 for those with more than 30 years of tenure.¹⁵
- ◆ In 2001, sales of "single-premium" annuities amounted to only \$10.3 billion, a very small amount compared to the likely need.¹⁶
- ◆ Buying an annuity in the market is actually more expensive than the "actuarially fair" value. In 1998, for example, a 65-year old male annuitant paid about 14 percent too much for an annuity.¹⁷

Endnotes

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- 16 Munnell and Sunden, *Coming Up Short*, p. 150.
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The first of these is the fact that the system is not a simple one. It is a complex system, and as such, it is not possible to understand it by looking at its parts in isolation. The system is a whole, and its behavior is determined by the interactions of its parts. This is a fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The second of these is the fact that the system is dynamic. It is not a static system, and its behavior changes over time. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The third of these is the fact that the system is interconnected. The parts of the system are not isolated from one another, and they all have an impact on the behavior of the system as a whole. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The fourth of these is the fact that the system is self-organizing. The parts of the system are able to interact with one another in a way that allows the system to adapt to changing conditions. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The fifth of these is the fact that the system is resilient. It is able to withstand shocks and stresses, and it is able to recover from them. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The sixth of these is the fact that the system is sustainable. It is able to continue to exist and function over a long period of time. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The seventh of these is the fact that the system is equitable. It is able to provide benefits to all of its members, and it is able to do so in a way that is fair and just. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The eighth of these is the fact that the system is transparent. Its behavior is understandable, and its decisions are explainable. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The ninth of these is the fact that the system is accountable. It is able to take responsibility for its actions, and it is able to do so in a way that is honest and open. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The tenth of these is the fact that the system is inclusive. It is able to involve all of its members in its decision-making process, and it is able to do so in a way that is respectful and collaborative. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.